

EURONEXT DERIVATIVES NOTICE

All Markets

No. NO190206DE

Issue Date:

6 February 2019

Effective Date:

11 February 2019

UPDATED VERSION OF EURONEXT CORPORATE ACTIONS POLICY

Executive Summary

This notice informs Members of changes to the Euronext Corporate Actions Policy which will come into effect on 11 February 2019.

1. Introduction

The purpose of this Notice is to inform Members of changes to Euronext's Corporate Actions Policy ("the Policy") which will come into effect on 11 February 2019. Please note that for Takeovers where a Corporate Action Notice with Implied Volatilities was published prior to the Effective Date, the Fair Value settlement will still take place in accordance with the current Appendix 1 (Euronext Corporate Actions Policy; version 5).

2. Changes to the Policy

2.1 The changes can be summarised as follows (additions shown underlined/deletions ~~strike through~~):

Section 1.2

This Policy Document explains Euronext's policy in relation to Corporate Actions in respect of:

- a. Option Contracts (as defined in section 2.1); and
- b. Futures Contracts (as defined in section 2.1); and
- c. Index Options (as defined in section 2.1); and
- d. Index Futures (as defined in section 2.1).

Section 1.3

This Policy Document is structured as follows:

- a. section 2 defines terms used throughout this Policy Document;
- b. section 3 provides background information;
- c. section 4 describes Euronext's policies and conventions in respect of Corporate Actions;
- d. section 5 outlines the methodology to be used to formulate adjustments in respect of Option Contracts and Futures Contracts;

The Euronext Markets comprise the markets operated by Euronext Amsterdam, Euronext Brussels, Euronext Dublin, Euronext Lisbon, Euronext London and Euronext Paris, referred to respectively as the Amsterdam, Brussels, Dublin, Lisbon, London and Paris markets, as relevant. Euronext refers to Euronext N.V. and its affiliates.

- e. section 6 outlines the Corporate Action types and the adjustment methodology in respect of Option Contracts and Futures Contracts;
- f. section 7 outlines the Corporate Action types and the adjustment methodology for Single Stock Dividend Futures, Index Options and Index Futures; and
- g. the Appendices provide further information on the calculation of Fair Value and Equalisation Payments for Option Contracts, Futures Contracts, Single Stock Dividend Futures, Index Options and Index Futures.

Section 2. Definitions

<u>Brussels Option Contracts</u>	<u>means Option Contracts that are listed on Euronext Brussels</u>
<u>Corporate Action</u>	<p>means</p> <ul style="list-style-type: none"> a. a cash and/or scrip dividend, a bonus or scrip issue, a rights issue, a share split, subdivision or consolidation, a demerger or any other event affecting or giving rise to a right or entitlement attaching or accruing to the Shares of, or ownership of Shares in, a company; or b. a takeover, merger or any arrangement, transaction or series of transactions which will or may result in the acquisition by any person or persons or any associated person or persons of a substantial proportion of the Shares of a company; or c. any other event which, in the opinion of Euronext, necessitates an amendment to be made to terms of an Option Contract and/or Futures Contract <u>and/or Index Options and/or Index Futures</u> in respect of the Shares of a company or an index
<u>Euronext</u>	<u>means, as the context requires, one or all of the following Relevant Euronext Market Undertakings: where Option Contracts and Futures Contracts are made available for trading, including Amsterdam, Brussels, Lisbon and Paris Euronext Amsterdam, Euronext Brussels, Euronext Lisbon and Euronext Paris.</u>
<u>Euronext Pricer</u>	<u>means the derivatives pricing application that is used by Euronext during the trading day to, amongst others, calculate reference prices for price validation of derivatives orders. Dividends and a volatility for each option series are determined within the Euronext Pricer, based on prices in the market. At end-of-day, the settlement volatility, dividend, interest rates and closing price of the underlying value are used to determine the Daily Settlement Price for the option series.</u>
<u>German Options</u>	<u>Means Option Contracts on German underlyings as specified on the Euronext website.</u>
<u>Fair Value</u>	<u>means the prices calculated by Euronext when Option Contracts and/or Futures Contracts <u>and/or Index Options and/or Index Futures</u> are closed out for a cash amount, after a merger or takeover or delisting</u>
<u>Fair Value Volatility</u>	<u>means the volatility determined by Euronext which is used to calculate the Fair Value prices as described in Appendix 1.</u>

<u>Index Future</u>	<u>means a future contract on an index</u>
<u>Index Option</u>	<u>means an option contract on an index</u>
<u>Relating COB Contract</u>	<u>means the COB Option Contract which has the same underlying value as the Flex Option Contract</u>

Section 3.3

Euronext will issue one or more Corporate Action Notices in respect of each Corporate Action where adjustment to an Option Contract, Futures Contract, Index Option or Index Future is required or expected under the terms of this Policy Document.

Section 4.1 Application of adjustment

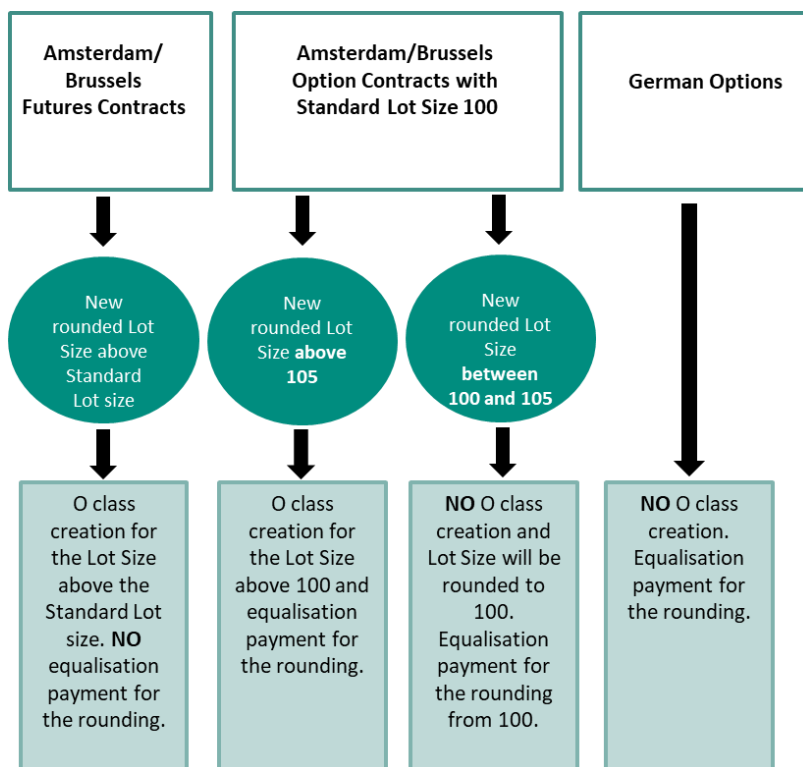
Please refer to Section 8 for Index Options and Index Futures.

Section 4.4 O-class contracts

4.4.1 Subject to section 4.4.2 below, with respect to Amsterdam Contracts and Brussels Contracts, except ~~except those Amsterdam Option Contracts that have an underlying value that is listed on Deutsche Boerse (Xetra) German Options~~, where application of the Ratio Method results in a Lot Size that is greater than the Standard Lot Size, Euronext will introduce an additional contract that will contain those Shares which are in excess of the Standard Lot Size (the O-class). Apart from the different Lot Size, the O-class will have the same specifications as the adjusted original contract. Therefore, holders of a position will still hold existing contracts with a Standard Lot Size and receive one additional contract for every existing contract held, that will contain Shares in excess of the Standard Lot Size. The additional contracts introduced will be designated with a Trading Code that usually has an "O" placed at the end of the Trading Code (hence "O-class"), and where this is not possible, with another letter.

4.4.2 The following exception on section 4.4.1 will apply; For Amsterdam Option Contracts and Brussels Options Contract with a Standard Lot Size of 100, except German Options, where application of the Ratio Method results in a rounded Lot Size that is between 100 and 105 (inclusive), no O-class will be introduced. In such a circumstance, no adjustment shall be made to the Lot Size. Instead, the Lot Size will be rounded to 100 and an equalisation payment will be made to neutralise the effect observed due to rounding of the Lot Size (as explained in section 4.5).

4.4.3 With respect to Amsterdam Contracts and Brussels Contracts, except German Options, where application of the Ratio Method results in a Lot Size that is smaller than the Standard Lot Size, Euronext will change the Trading Code of the contract, to become an O-class. At Euronext's discretion, contracts with the same expiry months as the affected contracts may be introduced with the Standard Lot Size, and will be designated with the original Trading Codes as the existing contract prior to adjustment.



Section 4.5 Equalisation Payments

For Option Contracts, an equalisation payment will be made to neutralise the effect observed due to rounding of the Lot Size as mentioned in section 4.4 and 5.1. (as described in Appendix 2).

Section 5.1 Ratio Method

Equalisation payments will be made for all **Option Contracts** to neutralise the effect observed due to rounding of the Lot Size (see section 4.4 and 4.5).

~~For **Amsterdam Contracts** and **Brussels Contracts**, where application of the Ratio Method results in a Lot Size that is greater than the Standard Lot Size, an additional contract will be introduced which contains the Shares which are in excess of the Standard Lot Size (the O class, see section 4.4).~~

Section 6.6 Mergers and Takeovers

In general all takeover offers shall lead to the ~~determination~~ calculation of Implied Fair Value Volatilities for the purpose of (a possible) Fair Value settlement as described in Appendix 1, whether the offer is in stock, or in cash or in a combination of both.

Section 6.8 Delisting

Where a company or ETF is delisted from its Relevant Stock Exchange on request of the relevant company or ETF-issuer and, as a consequence, the underlying Shares are no longer deliverable on an exchange designated by Euronext, Euronext shall use the Fair Value method to settle the open positions in the Option Contracts and Futures Contracts as described in Appendix 1. The determination of the Implied Fair Value Volatilities, for the purpose of settlement of the Options at their theoretical Fair Value, shall be based on the settlement prices of the relevant Options series over a ten business day period preceding the public announcement of

the (intended) delisting by the company, ETF-issuer or the Relevant Stock Exchange (as described in Appendix 1).

Section 8 Index Options and Index Futures

Fair Value settlement

Euronext shall use the Fair Value method as described in Appendix 1, to settle the open positions in any relevant Index Options or Index Futures, where:

(i) an index used as an underlying value for Index Options or Index Futures ceases to exist and the provider of such index has publicly announced the cessation of the index;

(ii) an index used as an underlying for Index Options or Index Futures only consists of Shares of one issuer and the provider of such index has publicly announced that such Shares will be removed from the index and not be replaced by different Shares;

(iii) an index used as an underlying value for Index Options or Index Futures only consists of Shares of one issuer and the company issuing such Shares has publicly announced the delisting of such Shares on the Relevant Stock Exchange;

(iv) an index used as an underlying value for Index Options or Index Futures only consists of Shares of one issuer, where such Shares are subject to a takeover-bid .

Intrinsic value settlement (in case of liquidation or bankruptcy)

In the event that an index used as an underlying value for Index Options or Index Futures only consists of Shares of one issuer and the shares of the issuer are delisted from its Relevant Stock Exchange as a consequence of liquidation or bankruptcy, the Index Options and Index Futures will be settled according to their intrinsic value.

Other changes to the index

In the event that an index used as an underlying value for Index Options or Index Futures changes as a result of other circumstances than those detailed in this Policy, Euronext will determine, at its discretion and on a case by case basis, if and how the relevant Index Options or Index Futures are to be settled or adjusted. Any subsequent amendments to the relevant Index Options or Index Futures will be published in a Notice.

Appendix 1: Calculation of Fair Value Method

The Fair Value method is used for the purpose of cash settling Options Contracts, Futures Contracts, Index Options and Index Futures. Fair Value prices are calculated on the effective date (for reference also see section 6.6 and section 8).

A.1.1 Option Contracts

For the purpose of settling Option Contracts, the Fair Value calculations will be made in the Euronext Pricer. Euronext will use the Cox Ross Rubenstein option valuation model.

A.1.1.1 Calculation of Fair Value prices ~~Determination of implied volatility~~ for COB Option Contracts.

Euronext will use the following parameters to determine the Fair Value prices for each option series:

- **Fair Value Volatility:** Euronext will use the settlement volatility, which has been used for the calculation of the Daily Settlement Prices by the Euronext Pricer, of the relevant options series. These settlement volatilities will be collected over a period of ten trading days, immediately preceding the announcement of the takeover bid. Subsequently, the average of each series' settlement volatility over such ten trading day period is calculated, excluding the lowest and the highest observation of that series over the ten trading day period.

Once determined, these Fair Value Volatilities are fixed until the moment of settlement, regardless of any changes in the price of the underlying share in the intervening period.

If the offeror increases the offer consideration or makes any other change to the respective offer (such as extending the acceptance period) during the course of a takeover, no new volatilities will be calculated. In addition, should a counterbid be launched by another company whilst a bid is still active (i.e. has not expired or been withdrawn), then the volatilities, calculated as described above and in relation to the initial bid, will be used if the counterbid should be declared effective.

- **Dividend forecasts:** The average dividend forecasts used for the calculation of Daily Settlement Prices by the Euronext Pricer collected over a ten trading day period.
- **Interest rates:** interest rates as used by the Euronext Pricer on the Effective Date.

The rest of section **A.1.1.1** is deleted.

Section A.1.1.2 is deleted. Section A.1.1.3 becomes section A.1.1.2.

In this section the following lines are deleted:

~~The option valuation model takes several factors into account, including the volatility of the option, interest and future dividends. For the purpose of settling Options Contracts at fair value, Euronext will use an average implied volatility based on the settlement prices of the relevant Options series over a ten trading day period preceding the announcement of the takeover bid.~~

Also all reference to Flex contracts have been deleted and Implied Volatility is replaced by Fair Value Volatility in this section.

A.1.2 Calculation of Fair Value Prices ~~the theoretical value~~ for Futures.

~~Euronext will use the following model for the purpose of settling Futures Contracts at theoretical value.~~

Fair Value calculations will be made in the Euronext Pricer. Euronext will use the following parameters to determine the Fair Value prices for single stock futures:

- **Dividend forecasts,** whereby the source of the dividend forecasts is:

- In the case that Euronext has an Option Contract on the same underlying value as the Future Contracts and the maturities of the Option Contract exceeds the maturities of the Future Contract:

The average dividend forecasts used for the calculation of Daily Settlement Prices by the Euronext Pricer collected over a ten trading day period;

- In the case that the maturities of the Future Contract on the same underlying value exceeds the longer maturity of the listed Option Contract on the same underlying value: Markit dividend forecasts on the day of the announcement of the takeover bid, will be used for those maturities;
- In the case that Euronext has no Options Contract listed on the underlying value of the Future Contract: Markit dividend forecasts on the day of the announcement of the takeover bid will be used.

■ **Interest rates:** interest rates as used by the Euronext Pricer on the effective date.

The rest of section **A.1.2** has been deleted.

A.1.3 Calculation of Fair Value Prices ~~the theoretical value~~ for Single Stock Dividend Futures

Fair Value calculations will be made in the Euronext Pricer. Euronext will use the following parameters to determine the Fair Value prices for Single Stock Dividend Futures:

■ **Dividend forecasts,** whereby the source of the dividend forecasts is Markit, dividend forecasts on the day of the announcement of the takeover bid.

■ **Interest rates:** interest rates as used by the Euronext Pricer on the effective date.

The rest of section **A.1.3** has been deleted.

A.1.4 Calculation of Fair Value Prices for Index Options

Euronext will use the following parameters to determine the Fair Value prices for each option series:

■ Fair Value Volatility: Euronext will use the settlement volatility, which has been used for the calculation of the Daily Settlement Prices by the Euronext Pricer, of the relevant options series. These settlement volatilities will be collected as described below:

1. over a period of 10 (ten) trading days preceding the public announcement made by the provider of the index as described in section 7.2 (i) and section 7.2 (ii); or
2. over a period of ten business days preceding the public announcement of the delisting of the Shares, as described in section 7.2 (iii); or
3. over a period of ten trading days preceding the announcement of the takeover bid.

Subsequently, the average of each series' settlement volatility over such ten trading day period is calculated, excluding the lowest and the highest observation of that series over the ten trading day period.

Once determined, these Fair Value Volatilities are fixed until the moment of settlement, regardless of any changes in the price of the underlying share in the intervening period.

If the offeror increases the offer consideration or makes any other change to the respective offer (such as extending the acceptance period) during the course of a takeover, no new volatilities will be calculated. In addition, should a counterbid be launched by another company whilst a bid is still active (i.e. has not expired or been withdrawn), then the volatilities, calculated as described above and in relation to the initial bid, will be used if the counterbid should be declared effective.

- Dividend forecasts, whereby the source of the dividend forecasts is Markit , dividend forecasts on the day of the announcement.
- Interest rates: interest rates as used by the Euronext Pricer on the effective date.

A.1.5 Calculation of Fair Value Prices for Index Futures.

Fair Value calculations will be made in the Euronext Pricer. Euronext will use the following parameters to determine the Fair Value prices for Index Futures:

- Dividend forecasts, whereby the source of the dividend forecasts is Markit, dividend forecasts on the day of the announcement.
- Interest rates: interest rates as used by the Euronext Pricer on the effective date.

Next to these changes all references to Flex contracts have been deleted in Appendix 1.

Appendix 2: Equalisation payments

A.1.2 Equalisation payment and the ratio method

In the case that an equalisation payment is made necessary under this Policy Document, the Ratio Method will be applied in the following manner (as described in section 5.1):

1. The exercise prices (K) will be multiplied by the ratio to create the adjusted exercise prices (K1), rounded as described in section 4.3 and 4.4.
2. The Lot Size (Q) will be divided by the ratio to create the new Lot Size (Q1) which will be rounded to the nearest whole share (Q2) as described in section 4.3 or rounded to the Standard Lot Size (Q2) as described in section 4.4.

- 2.2 An updated version of the Policy Document will be made available on the Euronext website (<https://derivatives.euronext.com/en/corporate-actions/corporate-actions-policies>).

For further information in relation to this Notice, Members should contact:

Euronext - EMS Corporate Actions	+31 (0) 20 721 9588	CorporateActionsTeam@euronext.com Euronext Derivatives Corporate Actions
----------------------------------	---------------------	--